LISTING OF THE CLAIMS

A complete listing of the claims is provided below. This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method for implementing traversal through Network Address Translation (NAT), comprising the steps of:

[[A.]] when a proxy server outside a Network Address Translation (NAT) server or a Firewall (FW) receives a signaling message from a packet user terminal in a first network, said proxy server analyzing the information loaded in the signaling message, recording the address and port of the call signaling and the address and port of Real-time Transfer Protocol (RTP) and Real-time Transfer Control Protocol (RTCP) of media stream loaded in the message, modifying the address and port of call signaling loaded in the message into the address and port of call signaling of a second network assigned for this call by said proxy server, and modifying the address and port of RTP and RTCP of media stream loaded in the message into the address and port of the second network assigned for the media stream by said proxy server;

[[B.]] said proxy server delivering the modified signaling message to a processing device of packet voice signaling or a service processing device;

[[C.]] when receiving a response signaling message sent to the packet user terminal in the first network, said proxy server analyzing the information loaded in the response signaling message, modifying the address and port of response signaling in the information loaded in the message into the recorded address and port of call signaling recorded in Step A, and modifying the RTP and RTCP address and port of media stream loaded in the message into the recorded RTP and RTCP address and port of media stream recorded in Step A;

[[D.]] said proxy server sending the modified response signaling message to the packet user terminal in the first network.

2. (Currently Amended) The method according to claim 1, wherein before ~~Step A~~ said proxy server analyzes the information loaded in the signaling message, the method further comprises:

the packet user terminal in the first network sends to said proxy server the signaling message which is first sent to the NAT server or FW; the NAT server or FW assigns an address/port of the public network for the signaling message, modifies the source address in the IP header of the signaling message from the address/port of the first network into the assigned address/port of the public network, and records in the mapping relations of signaling addresses a corresponding relation between the address/port of the first network and the address/port of the public network assigned by the NAT server or FW before forwarding the signaling message to said proxy server.

3. (Currently Amended) The method according to claim 1, wherein after ~~performing Step A~~ said proxy server modifies the signaling message, the method further comprises:

said proxy server initiates messages periodically to said packet user terminal in the first network, refreshing the mapping relations of signaling addresses on the NAT servers or FWs.

4. (Original) The method according to claim 1, wherein said processing device of packet voice signaling or service processing device is a soft-switching device or a voice over IP gatekeeper device.

5. (Currently Amended) The method according to claim 1, wherein ~~Step A~~ the method further comprises the steps of:

when receiving the call signaling from the packet user terminal in the first network, said proxy server records the address and port in the IP header of the call signaling, and modifies said address and port into the address and port of call signaling in the second network assigned for this call by said proxy server; and

~~step C further comprises:~~

when receiving a call signaling sent to the packet user terminal in the first network, said proxy server modifies the address and port in the IP header of the call signaling into the recorded address and port of the IP header of the call signaling.

6. (Original) A system for implementing traversal through Network Address Translation (NAT), comprising:

a packet user terminal located in a first network, for initiating and receiving services;

a proxy server located in a second network, for receiving signaling messages from said packet user terminal in the first network, analyzing the information loaded in the signaling message, recording the address and port of call signaling loaded in the message as well as the address and port of media stream thereof, modifying the address and port of call signaling loaded in the message into the address and port in the second network assigned for this call by said proxy server, and modifying the address and port of media steam loaded in the message into the address and port of the second network assigned for the media stream by said proxy server before sending the modified signaling message to a soft-switching device;

when receiving a response signaling sent to the packet user terminal in the first

network, said proxy server analyzes the information in the message load of the response

signaling, modifies the address and port of response signaling in the message load into the

recorded address and port of call signaling, and modifies the address and port of media

stream carried in the message load into the recorded address and port of media stream before

sending the modified response signaling to the packet user terminal in the first network; and

said soft-switching device, which is for providing integrated services and call control,

forwarding to said proxy server the response signaling message sent to said packet user

terminal when the response message is received.

7. (Original) The system according to claim 6, further comprising:

a NAT server or FW, for providing services of accessing the second network for said

packet user terminal and transmitting messages between said packet user terminal and said

proxy server.

8. (Original) The system according to claim 6, wherein said packet user terminal is a

user terminal performing audio and video communications by means of H.323 protocol,

Session Initiation Protocol (SIP), Media Gateway Control Protocol (MGCP), or H.248

protocol.

9. (Original) The system according to claim 6, wherein said proxy server is used for

charging based on flow volumes.

10. (Original) The system according to claim 6, wherein said proxy server is used for

conducting access control of users and bandwidth management, and encrypting Quality of

Service labels of media streams, Virtual Private Network labels and information.

11. (Original) The system according to claim 6, wherein said proxy server is used for

configuring multiple pairs of addresses of the first network and the second network, and

implementing traversal through multiple NAT servers or FWs.

12. (Original) The system according to claim 6, wherein said proxy server updates

session list items or list items of address translating relation of media streams by adopting a

first-packet refreshing approach.